Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	
	)	

REPLY COMMENTS OF THE NATIONAL PUBLIC TELECOMPUTING NETWORK

The National Public Telecomputing Network ("NPTN"), by its attorneys, respectfully submits these reply comments in connection with the Commission's implementation of the "universal service" provisions of Section 254 of the Telecommunications Act of 1996.[1] NPTN addresses in particular the means for FCC achievement of the Act's goal of access to advanced information services for all Americans, especially schools, libraries, hospitals, and rural and underserved areas.

INTRODUCTION

Information service access, including the special needs of educational and medical institutions and rural Americans, is a central concern of the 1996 Act. NPTN proposes a new model for meeting the universal service mandates of the Act, centered on the role of community computer networks in fostering the educational, cultural, and economic opportunity policies of universal service.

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[1] *Federal-State Joint Board on Universal Service,* Notice of Proposed Rulemaking and Order Establishing Joint Board, FCC 96-93, CC Docket No. 96-45 (released March 8, 1996)("NPRM"). By Order released April 1, 1996 (DA 96-483), the Common Carrier Bureau extended the date for filing reply comments in this proceeding to May 7, 1996.

NPTN submits that the FCC should establish a technology-neutral universal service support mechanism focused not on funding telecommunications or information service providers, but rather on funding local nonprofit organizations creating community computer networks. This approach better realizes the Jeffersonian ideals underlying the 1996 Act, by empowering local organizations to decide and fulfill their own information needs, while providing an electronic communications vehicle for reintegrating citizens into the cultural, social and economic affairs of their communities.

NPTN is a nonprofit organization dedicated to the development of public-access community computer systems known as "Free-Nets."® Free-Nets occupy a middle ground on the spectrum between commercial online services (such as CompuServe or America Online) and individual computer bulletin board services, or "BBSs." Free-Nets provide communities with public, low-cost access to the Internet, but they are much more than "on ramps" to the "information superhighway." Free-Nets are first and foremost local systems, run by local people, using local resources to meet local communications and economic needs.

This decentralized model for decision-making on information service access methods and content is perfectly designed to meet the Act's universal service requirements, and to achieve the Commission's traditional communications policy goals of diversity and localism. It is also consistent with the Act's requirements for an explicit, nondiscriminatory system of universal service support mechanisms in a competitive telecommunications marketplace. Community networks will create concentrations of demand, providing substantial competitive incentives for telecommunications carriers to develop low-cost, efficient communications options for communities to use as their information

infrastructures, and to interconnect these community networks with each other across counties, states and the entire world through the global Internet.

The most urgent requirement of today's plans for a National Information Infrastructure is that no one's ability to be a full citizen in our republic should be lessened by the rapid advances in technology.[2] As a nation, America must ensure that over the coming decade all citizens have public access to community computer systems, just as over the last centuries we ensured that all citizens had public access to community libraries. These 21st century community computer networks, like their library antecedents, will provide people with affordable access to local, national and international information resources and communications, enabling them to function better as active members of their communities, and in turn, as citizens of our nation, and the world. By adopting NPTN's community network model, the Commission can thus meet the true economic and informational opportunity ideals of universal service by facilitating the development of local-oriented digital content and fostering a renew sense of civic health and culture in an age of social disintegration, mass media and interstate freeways.

I. NPTN AND COMMUNITY NETWORKS

NPTN is the parent organization to a growing family of "Free-Nets"—on-line community computing systems—throughout America and in many other countries.[3] Free-Nets are multi-user, public access computer networks with

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[2] *See* Connecting the Nation: Classrooms, Libraries and Health Care Organizations in the Information Age (NTIA 1995).

[3] *See* http://www.nptn.org. For a more general overview of community networks and their role in making information technology widely available on a democratic basis, *see* Anne Beamish, Communities On-Line: Community-Based Computer Systems, http://alberti.mit.edu/arch/4.207/anneb/thesis/toc.html (February 1995).

much of the power and sophistication of commercial online services and Internet service providers. Yet each system is locally owned and operated by a nonprofit, community-based organization whose governing body is made up of people active in local community affairs. This community-based leadership ensures that each Free-Net is driven by the information and communications needs of the local environment, and tailors its technology and content to the informational requirements of the community it serves.

Free-Nets are dedicated to bringing the benefits of the "Information Age" to as many people as possible at the lowest possible cost. Free-Nets offer connectivity to the rich national and global resources of the Internet, so that applications such as electronic mail, "distance learning" and "telemedicine" can be made available to all subscribers, rural and urban, as well as to all educational and medical institutions. But Free-Nets are much more than simply "on-ramps" to the "information superhighway." They are first and foremost local systems, run by local people, using local resources, to meet local needs.

The Free-Net in each community thus helps recreate for the Information Age the unifying and information functions historically served not only by libraries, but also by village greens, town meetings and local newspapers. Like these historical predecessors, Free-Nets are interactive in the best sense: information is both generated onto and drawn off each Free-Net by members of the community. The Free-Net becomes an additional medium through which local citizens enhance their sense of community. Examples of the type of information and services that can be found on these systems are schedules for public transportation and adult education classes, job opportunities, city legislation, school lunch menus, calendar of events, homework help lines, advice from local profes-

sionals and tradespeople (from auto mechanics to lawyers), library and police information, restaurant listings, tourist attractions, motor vehicle renewals, health information, business listings and advertisements, indexes to local newspapers, social services information, and reports from members of Congress. In addition to information services, community networks provide important, "virtual" forums for residents to discuss local issues, including publicizing and organizing local activities and bringing together local experts in various fields with local students.

NPTN helps to bring Free-Net community computer systems online with organizational and technical support, and welds them together into a common framework. Free-Nets can also take advantage of high-quality NPTN-generated information and communications services to supplement the content the Free-Nets generate on their own. These features, known as "CyberCasting"[sm] services, include information and communications features in areas such as K-12 education, health and wellness, and local and national government information services.

Under NPTN's leadership, more than 200 community-based Free-Nets have been established since 1989.[4] These have included both Metropolitan Information

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[4] The Cleveland Free-Net (http://inswww.ins.cwru.edu:80/net/easy/fn/) is the oldest and largest Free-Net in the country. Operated by Case Western Reserve University, it is open 24 hours a day to anyone with a computer and modem. The services offered by the system range from free world-wide electronic mail to information in areas such as health, education, technology, government, arts, recreation and the law.

Founded by Dr. Tom Grundner in 1986, the Cleveland Free-Net was the first community computer network. It grew out of an experimental bulletin board called "St. Silicon's Hospital and Information Dispensary" which tested the effectiveness of using telecomputing as a means of delivering health information to the public. A person could leave a medically-related question on the bulletin board and have it answered by a board-certified family physician within 24 hours. The project was so successful that AT&T, the Ohio Bell Telephone Company and the University Hospitals of Cleveland donated funds to expand and develop the concept. *(Footnote continued on next page)*

Networks (in communities of greater than 50,000 population) and Rural Information Networks (in communities of less than 50,000 population).[5] Because they are premised on volunteerism, Free-Nets are remarkably inexpensive to start and maintain. They typically have required only $10,000 to $15,000 to launch, including the computing equipment and suite of server software applications provided by NPTN. Free-Nets also typically secure corporate and foundation sponsors to defray some or all of their start-up and operational expenses.

II. THE NPTN COMMUNITY NETWORK PROPOSAL

The universal service provisions of the 1996 Act place great emphasis on meeting the needs of America's educational and medical institutions for access to advanced telecommunications and information services. The Commission's mandate in Section 254(b)(6) of the Act[6] is that "[e]lementary and secondary schools and classrooms, health care providers, and libraries should have access to advanced telecommunications services." Section 254(h)(2)(a) of the Act specifically directs the Commission to craft competitively neutral rules "to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services" for public and nonprofit K-12

The Cleveland Free-Net system began with 10 telephone lines and provided information in law, medicine, education, arts, sciences, and government, as well as free electronic mail. A second phase of the system opened in 1989 with larger memory and hard disk storage. The system now has nearly 60,000 registered users. In 1989, Dr. Grundner went on to found NPTN.

[5] Based on a grant from the National Telecommunications and Information Administration, NPTN operates the "NPTN/NTIA Rural Information Network" program, with additional assistance from The Ameritech Foundation and The Corporation for Educational Communications. The objective of the program is to create 30 Rural Information Networks ("RINs"), and more than that number of RINs are currently under development in communities ranging from North Dakota to Maine, and points in between.

[6] Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, § 101 (1996)(to be codified at 47 U.S.C. § 254(b)(6)). References to the 1996 Act will, for clarity, be to the sections of the Communications Act of 1934 as amended by the Act.

schools and libraries. Similar special universal service support mechanisms must be developed for hospitals and for rural Americans.

The Commission's NPRM recognized that under the 1996 Act, the historical universal service system needs to be restructured to serve the new, competitive telecommunications environment. The era of monopoly providers and homogeneous telecommunications needs is over. Modern universal service policy must function in an environment of divergent needs, of new technologies and of multiple providers, ranging from national firms providing a range of services to niche and local providers serving particular requirements.

A modern universal service policy must be competitively neutral and technologically neutral, so that the market can determine—and frequently reconsider—its choices of providers and technology. And a modern universal service policy must also ensure that the benefits of the Information Age are available to all Americans, rich and poor, urban and rural. Our nation has understood for two centuries that an informed citizenry is crucial to a strong republic, and that we have a national obligation to ensure that equal information opportunity exists for all citizens through community-based organizations like schools and libraries.

The Telecommunications Act of 1996 thus challenges the Commission to conceive of the electronic libraries of the 21st Century: community-based systems by which all citizens can have public access to the information resources of the Internet. Fortunately, the technology is available to accomplish this on a broad scale, at relatively low cost. NPTN's leadership in development of community Free-Nets demonstrates that advanced information service access can be made available to connect communities not only with the wealth of information

available on the Internet, but also with local educational and medical institutions and businesses.

Free-Nets advance the goals of universal service directly, by offering access to advanced information services on a public, low-cost basis for all subscribers. And Free-Nets advance universal service by creating active user communities across the country for which commercial telecommunications providers compete to provide interconnectivity. Some commenters in this proceeding have suggested that the Commission either defer decision on information access for schools, libraries and hospitals, on the ground that the market is changing too rapidly for the Commission to select specific telecommunications services for universal service support, or that the FCC should simply provide discounts for switched 56Kbps digital services to schools.[7] Federally supported community networks are superior to both these alternatives, because the Commission would defer to local nonprofit organizations to select the optimal telecommunications services needed to support their network infrastructure, and local needs would drive the market for advanced information services.

With a pool of local capital available for information access, communities themselves would be empowered to determine the most cost-efficient means of making information services available to their citizens and educational and medical institutions. Telecommunications carriers, in turn, would have a clear business incentive to develop cost-effective, broadband services for local community information access requirements. And all of this could be accomplished

[7] *See, e.g.,* Comments of Sprint Corporation at 23 (premature to develop educational, health care or rural services and discounts); Comments of US West, Inc. at 21-22 (56Kbps access line and toll-free dial-up access to an ISP).

without the inflexibility arising from uniform national requirements for information access in the rapidly changing telecommunications and Internet market environments.

The Internet is organized with a similar decentralized, "bottom-up" structure precisely because the access and interconnectivity requirements for individual computer networks are a function of their own unique mix of computing, telecommunications and economic resources. The FCC can ignore this well-functioning model for information access only at the risk of making premature or rigid technology choices. The better approach to the information service access requirements of the Act is to avoid selecting specific services or technologies for universal service support, instead creating a structure under those decisions can be made on a decentralized basis.

In this light, NPTN proposes that the FCC implement the Act's requirement of universal information access for schools, libraries, hospitals and rural and underserved areas by adopting a "community network" model for universal service. What is needed is simply a mechanism to provide federal funding to serve as "seed money" for establishing community networks. As Ameritech points out:

> Commission-funded support for schools, libraries and hospitals could enable the universal service support to operate as seed money to encourage other potential participants (such as foundations, equipment providers, school administrators, teachers, parents and local communities) to work together to provide other essential components of a total coordinated technology use plan to achieve the maximum benefit from the services and functionalities funded by universal service support dollars.

Ameritech Comments at 21; *accord,* Information Technology Industry Council Comments at 11. Thus, rather than providing universal service support

payments to telecommunications carriers, the FCC should instead make a portion of these funds available directly to community-based organizations dedicated to the creation of local information service networks.

Under this universal service model, each qualifying community network would be required to provide free or low-cost access for all schools, libraries and hospitals serving the relevant geographic area, and subsidized access rates for low-income citizens. In this way, the Commission would help achieve the Act's universal service mandates with a system optimized for the unique informational needs of every community and avoid the difficult, and perhaps impossible, task of creating national information access standards for schools, libraries and hospitals.

NPTN proposes that the FCC establish a nonprofit organization, to be known as the "Corporation for Community Networks," to screen applications for federal seed money for community network projects. This organization would be made up of volunteers chosen for diverse expertise in such fields as education, computing, online services, and community service organization. To qualify for federal funding, a community network applicant would have to meet these criteria:

1. Local Participation. The applicant would have to be a nonprofit organization, representative of its community, with sufficient expertise and capacity to establish a community network and attract volunteers to develop local content. This local participation will ensure that the information service and access needs of the community are addressed, without any need for the FCC to involve itself in determining either the needs themselves or how they best can be satisfied.

2. *Information Access.* The applicant would have to demonstrate that it will provide significant local content, the nature of which is determined by the requirements of the community, as well as access to the broader resources of the Internet. Once again, the FCC would merely have to determine that the nonprofit applicant is organized to determine the locally required scope of information access, and is competent to procure the telecommunications services and information content necessary to met community needs. The applicant must of course accept oversight responsibility to insure that the project fulfills its mission and intent, and that the federal funds, as well as all other financial resources, are used for their intended purpose.

3. *Open Access.* The applicant would have to demonstrate that it will provide dial-up access through a local call, free or low-cost access to the community network at all area schools, libraries, and hospitals, and access through public terminals and sites available to all residents, including low-income and senior citizens.[8] This is one crucial facet of universality, making physical access available to all citizens.

4. *Training and Support.* The applicant would have to demonstrate that it will provide volunteer-based training and support. This is another key facet of universality. Physical access to the Internet and information services is meaningless unless people can competently use the technology to meet their communication and informational needs. Training and support will be key to

[8] The community network model is particularly suited to provide information service access needs for low-income and elderly subscribers, because each community would have the discretion to develop the mix of free public access facilities and subsidized "home" access rates that best meets the needs of its low-income and senior citizens.

making universal access a reality. Computer-literate volunteers, including students, will provide valuable community service, while building bonds among diverse groups in the community.

III. COMMUNITY NETWORKS WILL BEST ACCOMPLISH TRUE UNIVERSAL SERVICE FOR THE INFORMATION AGE

Community networks will be organized and run at the local level. The FCC's involvement will be limited to providing seed money to a competent nonprofit community organization. The result will be local networks that serve as bridges among citizens, bringing them together as a "community online"—not just another "online community"—as well as linking them to the international "virtual" community of the Internet. The technology and telecommunications service decisions, as well as the content decisions, will be the result of local environment and local needs.

This model of federal funding but local decision-making will achieve the true meaning of "universal service" in the Information Age. Whether on a dial-up basis from their homes, from a terminal in their schools or libraries, or from a public access site, citizens will be able to share their community life as they once did in formal town meetings or informal meetings on the village green, and to find even richer and more varied sources of information than in libraries. This model will also stimulate technological innovation and price competition among telecommunications firms vying to serve these active user groups.

People will no doubt use these community networks to look for goods and services they desire, ranging from baby sitters to new homes. Local businesses will be able to make and modify announcements of their goods and services, as well as available jobs, easily and inexpensively. People will also use community

networks to exchange ideas about personal and community issues, allowing the same kind of easy and wide discussion and interaction on community issues that the Internet now allows for a vast range of interest groups. Community networks will serve as a forum for ongoing "electronic town meetings" available to all citizens, conditioned only on their willingness to participate.

In a very real sense, NPTN's community network proposal can serve as the means for establishing a "critical mass" of electronically connected Americans. The Act's information service access goals, like the special provisions on educational and medical institutions, exist not just to facilitate the widespread deployment of advanced telecommunications technologies, but to encourage a new era of informational opportunity for all Americans. Technology alone is useless unless it is coupled with both content and usability. By funding community FreeNets, the Commission can spur the development of local-oriented information resources, assist in the creation of community-based, user-supported training programs, and foster a new sense of digital community that counter-balances the divisive social effects of urban sprawl, family disintegration and neighborhoods in which neighbors no longer know each other. These content and community objectives are not ancillary to the Act's universal service provisions: they are the very reasons universal information service access is vital for 21st century America.

CONCLUSION

The Commission has a unique opportunity to achieve the universal service requirements of the 1996 Act with a system for funding locally based public information access. Adoption of NPTN's community network proposal would assure access to advanced information services for schools, libraries, hospitals, and rural and underserved areas, further traditional FCC policy objectives of localism and diversity, and encourage integration of individual citizens with their local—and national—communities. Funding universal service through community networks would in addition provide a competitively and technology-neutral vehicle for achieving universal participation for all Americans, regardless of income level or geographic location, in the National Information Infrastructure.

Respectfully submitted,

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Dated: May 7, 1996

CERTIFICATE OF SERVICE

I, Gregory B. McClinton, do hereby certify on this 7th day of May, 1996, that I have served a copy of the foregoing document via first class mail, postage prepaid, to the parties below:

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